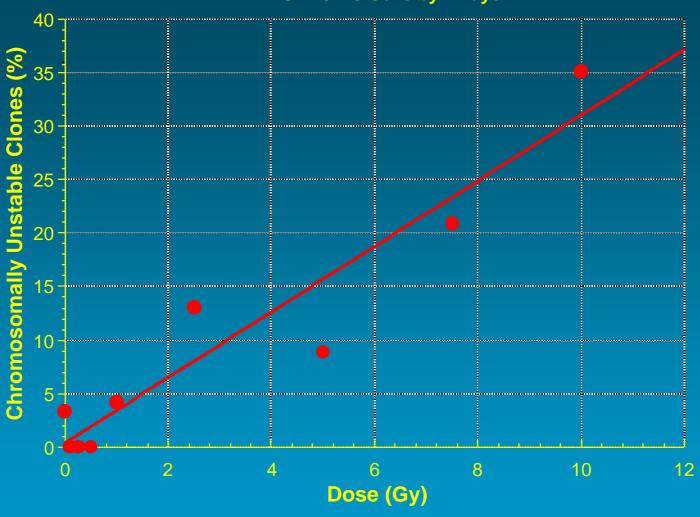
Radiation Injury and Oxidative Stress

C. Limoli U.C. San Francisco

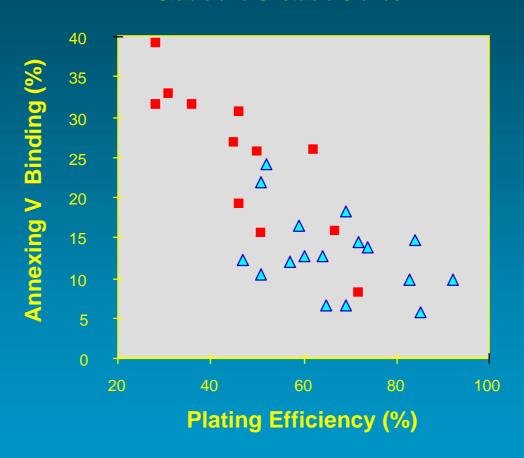
Genomic Instability: Causes

- Complex DNA damage
- Oxidative stress
- DNA repair deficiencies
- DNA replication deficiences
- Loss of cell cycle checkpoint
- Elevated recombination
- Disruptions to telomeres

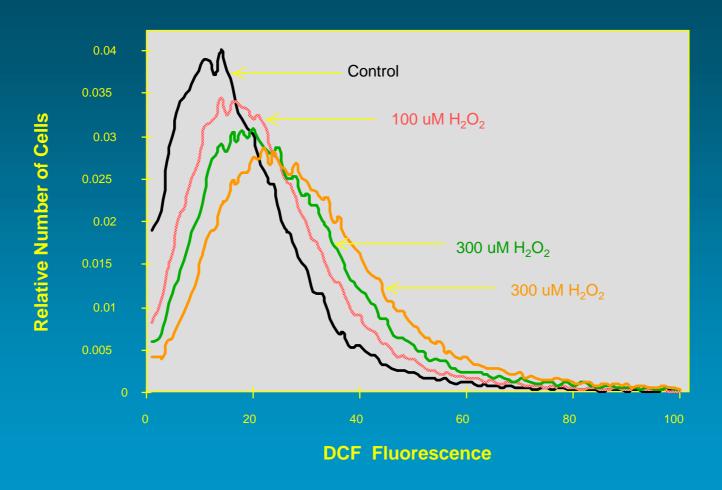
Dose Response for the Induction of Chromosomal Instability in GM10115 Cells by X-rays



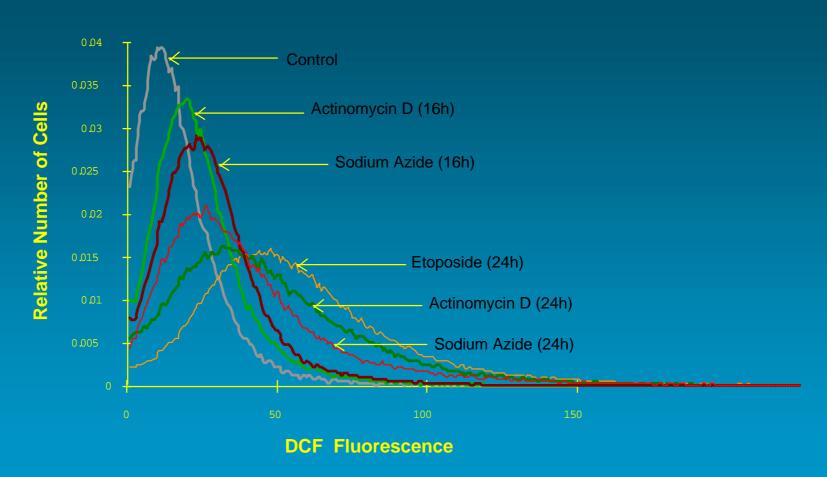
Apoptosis versus Plating Efficiency in Chromosomally Stable and Unstable Clones



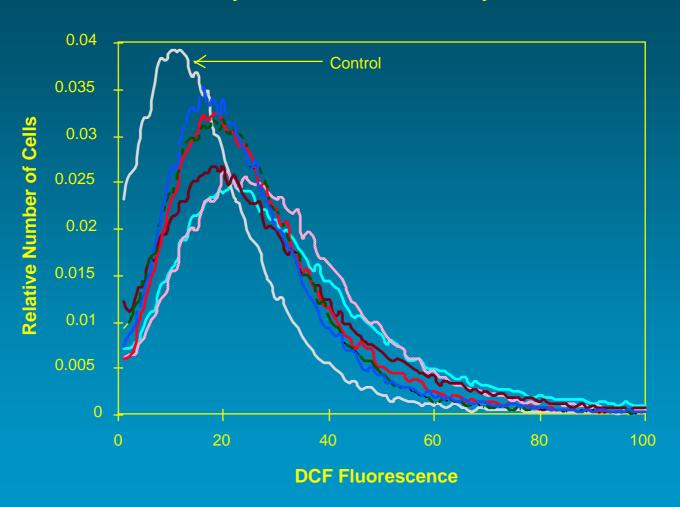
H₂**O**₂ Mediated Induction of Intracellular Peroxy Radicals



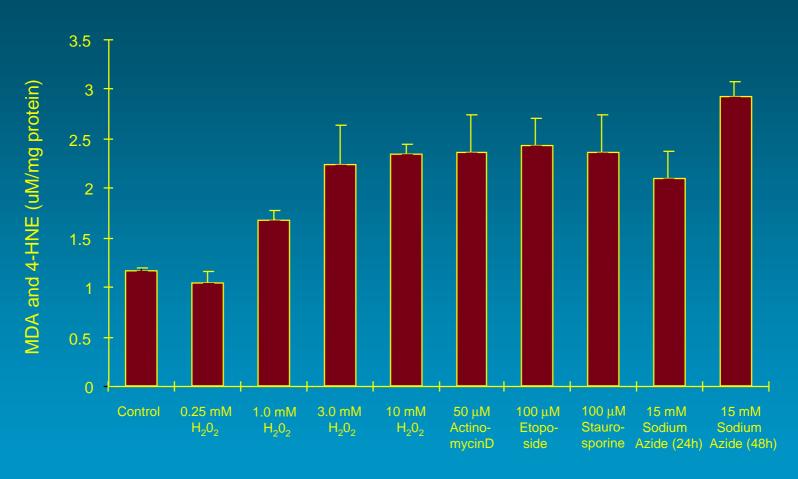
Chemically Mediated Induction of Intracellular Peroxy Radicals



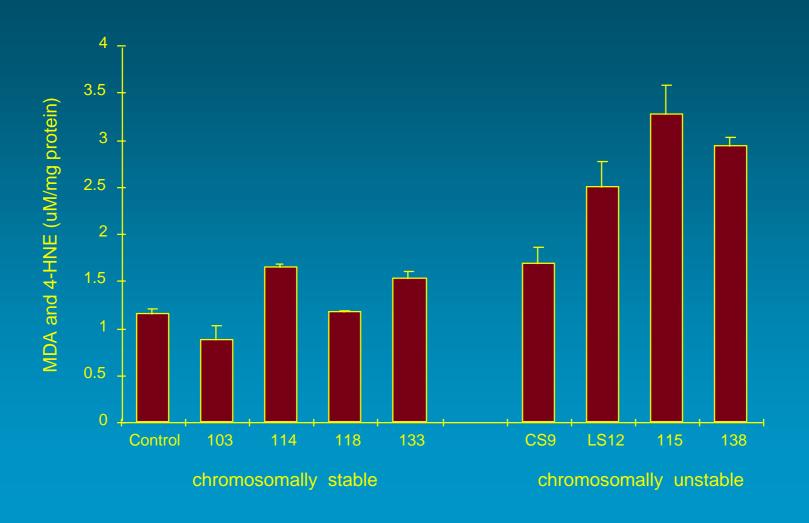
Intracellular Peroxy Radicals in Chromosomally Unstable Clones



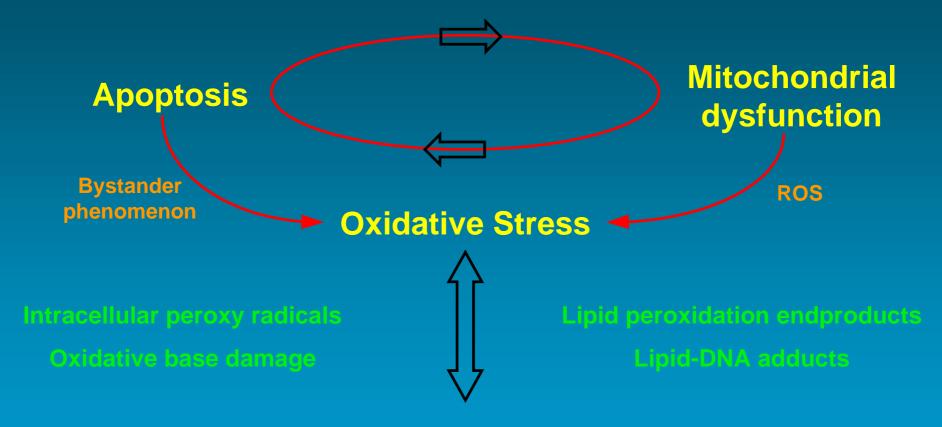
Chemically Mediated Induction of Lipid Peroxidation End Products



Lipid Peroxidation End Products in Chromosomally Stable and Unstable Clones



Genomic Instability and Oxidative Stress



Perpetuation of Genomic Instability